

## **ABSTRACT OF THE DISCLOSURE**

The present invention concerns an apparatus for collecting ground radar data with polarization information comprising a main body exhibiting structure for moving the apparatus along the ground, a part that rotates in relation to the main body supporting a pair of antennas of transmitter and receiver type, a power source with connected control unit for controlling and governing the ground radar, a transmitter unit electrically connected to one of the pair of antennas for generating and transmitting radar pulses and a sampler unit electrically connected to the other antenna for receiving the reflected radar pulses. To improve signal quality and reduce sensitivity to interference, the rotating pair of antennas support the transmitter unit, sampler unit and A/D converter contained in the sampler unit, the power source and the control unit are located in the main body and are electrically connected to the transmitter unit and sampler unit via a slip-ring arrangement, in which the radar signals are conveyed digitally via the slip ring arrangement.